

SHARING OUR TOYS

Cooperative Learning Versus Collaborative Learning

BY KENNETH A. BRUFFEE



College and university faculty members and administrators have been rediscovering recently that two or more students working together may learn more than individual students working alone: two heads are better than one. Some people call this rediscovery cooperative learning. Others call it collaborative learning. Is there really any difference between the two? If so, what is it, and does it matter?

Everyone knows the short answer to the first question. Cooperative learning and collaborative learning are two versions of the same thing. Practitioners of cooperative learning and of collaborative learning have independently developed some educational ideas that are after all pretty encrusted with age: helping students learn by working together on substantive issues. Both groups know they are reinventing the wheel. And although members of both groups may disagree among themselves about terms and methods, principles and assumptions, their long-range goals are strikingly similar.

Still, cooperative learning and collaborative learning do differ

in some ways that college and university teachers and administrators should know about. These differences have two causes. First, collaborative and cooperative learning were developed originally for educating people of different ages, experience, and levels of mastery of the craft of interdependence. Second, when using one or the other method, teachers tend to make different assumptions about the nature and authority of knowledge.

EDUCATION AS REACCULTURATION

John Dewey called activities in which human relationships are the key to welfare, achievement, and mastery "associated life." (1963. See box.) It's a useful cover term for all kinds of educational ideas and procedures, old and new, in which people depend on one another and learn with one another.

The idea of "associated life" in education goes back in America at least, as Ann Ruggles Gere has reminded us, to Benjamin Franklin. Living as a youth in colonial Boston under conditions of near abject poverty, Franklin organized learning groups in order to pursue his own education. Mara Holt's studies of collaborative pedagogies of the 1920s through the '50s explore perennial attempts by Americans to institutionalize

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"associated life" educationally. And in pondering the nature and potential of associative education, college and university faculty members and administrators have themselves been engaged in an associative educational enterprise.

In "associated life," though, as in most everything else, there ain't no free lunch. Two heads are better than one if, and only if, the two heads agree on what they're doing and on how they're going to go about doing it. For "associated life" to become an important element in education, the people involved almost always have to undergo some kind of change. Working together well doesn't come naturally. It's something we learn how to do.

What we learn in particular is that to work well together, sometimes we may have to give something up. What we learn to give up is always getting to do exactly what we want to do. Or, if we do get to do what we want to do, we may have to give up always doing it in exactly the way we want to do it.

In short, people who work well together have learned to share their toys. As the father of three boys, I feel fairly confident in assuming that we are not born knowing how to share our toys or wanting to share them.

By "our toys," of course, I don't just mean the sort of miscellaneous and fragmented wheeled vehicles, plastic gim-cracks, board games, baseball bats, and bottle caps at this very moment gathering dust in every corner of my cluttered Brooklyn home. By learning to share "our toys," I mean learning to share our books, our ideas, our beliefs, our way of life, our cities, our country, our world. Most of us spend a lifetime learning to share our toys. Like most people, I'm still learning how to share my toys, too.

Earlier in this century, the great pioneers of social group work such as Kurt Lewin, Warren Bennis, Herbert Shepard, and one of my own early mentors in all this, William Schwartz, analyzed the difficulties we face in trying to make "associated life" succeed. Those difficulties boil down to the unavoidable conflict we all experience between what Roberto Unger calls our "mutual longing" or "unlimited need" for each other and the "unlimited danger" or "jeopardy" with which we threaten each other.

These social group work pioneers also taught us a lot about the changes people have to undergo in order to cope with those social needs and dangers. Much of what they taught has been rediscovered and is being applied imaginatively to education today by leading social scientists, social psychologists, and educators such as Elizabeth Cohen, Kenneth Gergen, David and Roger Johnson, Shlomo and Yael Sharan, Richard and Patricia Shmuck, Robert Slavin, and others.

This research has discovered not only the educational benefits of "associated life"; it has also discovered that, in education, to reap these benefits we all need some reacculturation up front and, perhaps, from time to time, some more along the way. By reacculturation I mean renegotiating membership in groups or cultures we already belong to and becoming members as well of other groups or cultures. Throughout life we set

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out repeatedly to reacculturate ourselves, in small ways and large, whether we like it or not.

Yet reacculturation is one of the hardest tasks we ever undertake. It is complex, painful, and, in most cases, forever incomplete. It involves modifying or renegotiating our participation in the language, values, knowledge, and mores of the communities we come from, as well as becoming fluent in those same elements of the communities we are trying to join. And reacculturation is extremely difficult to accomplish alone. We move from group to group best in a group.

When we first begin to learn to share our toys as young children playing with other children, we renegotiate our membership in communities where what we want always comes first, and we join other communities in which sometimes what other kids in the sandbox want comes first. We join those more collectively oriented communities in our own self-interest: we soon discover that they empower us to build bigger and better sand castles.

CONSTRUCTIVE CONVERSATION

Because this power is now all but self-evident, many college and university teachers and administrators understandably want to tap it. They are exploring the notion that education is reacculturation and are beginning to grasp some of the practical implications of that understanding. That is, they realize that teachers are agents of cultural change. This new understanding of education as reacculturation is changing our understanding of what teachers do when they teach.

Lots of us have known for a long time, of course, how to state negatively the post-Deweyan case about what teaching is. Students, we have been saying, do not learn by "taking in" what teachers tell them. Teachers do not dish out knowledge for students to swallow.

We can now state this same case positively in a way that includes, but goes somewhat beyond, Dewey's doctrine that "school is primarily a social institution" and that experience is education. We can now identify the particular experience that educates: constructive conversation. Students learn by joining transition communities in which people construct knowledge as they talk together and reach consensus. What teachers do is set up conditions in which students can learn. And one of the most important ways teachers do that is by organizing students into transition communities for reacculturative conversation.

Take physics, for example. We used to say, and alas some of us still do, that physics teachers "provide information" about the physical world that students then "assimilate." Today we tend to say instead that what physics teachers do is help students, as Arnold Arons puts it, to reinvent physics and, through associative effort, gain enough fluency in the language of physics to join the community of physicists.

Thomas Kuhn succinctly states the underlying principle at the end of *The Structure of Scientific Revolutions*. Knowledge, he says, is "intrinsically the common property of a group or else

nothing at all." A teacher's job is to reacculturate students into groups whose common property is one or another kind of knowledge. Teachers do that by introducing students to the conversation that constitutes each group, the conversation with which each group constructs its common property, its knowledge.

FOUNDATIONAL VS. NONFOUNDATIONAL KNOWLEDGE

We begin this long educational, that is, acculturative, process at birth—even before birth, some would argue. Our earliest acculturation is becoming a family member. Most of us undergo our first major reacculturation when we go to school. Robert Fulghum says that everything he really needs to know he learned in kindergarten. He overstates the case, but not by much. Primary school education is, and should be, mostly foundational—that is, "basic."

By basic, though, I don't mean the three R's and damn the frills. I mean something quite specific. Most of the knowledge we acquire in primary school is basic in the sense that it is as nearly foundational knowledge as we ever get: socially justified beliefs all of us agree on.

That is, primary school education initiates us into established knowledge communities constituted by languages such as raising our hand to be heard, spelling "sauce" correctly, stealing second base, knowing what Hamlet says in the first scene, the battlegrounds of the Revolutionary War, and the Bill of Rights. Not many people would bother to disagree that "sauce" is spelled with an "s" and a "c," that George Washington's army camped at Valley Forge, that the Fifth Amendment is the right not to bear witness against oneself, that $2 + 2 = 4$, and that Hamlet's first line is "A little more than kin and less than kind." Because agreement is so widespread, this knowledge counts as foundational.

Primary school children may well know, need to know, and find interesting to learn that people may disagree about how to arrive at any of these propositions. Most primary school children are comfortable with the notion that there is more than one way to skin a cat. What most do not know, need to know, or in most cases have much interest in knowing is that there may be conditions under which people may disagree with any of these propositions. Disagree that $2 + 2 = 4$ or that Washington camped at Valley Forge? Come on.

When we go to college, though, and possibly beginning as early as middle school and high school, our needs and interests change. The main purpose of primary school education is to help children renegotiate their membership in the local culture of family life and help them join some of the established knowledge communities available to them and the encompassing culture we hold in common. An important purpose of college or university education is to help adolescents and adults join some more of the established knowledge communities available to them. But another, and perhaps more important purpose of college or university education is to help students renegotiate their membership in the encompassing common culture that until then has circumscribed their lives.

In college we learn a bewildering array of uncommon, diverse, and often dissenting languages: the language of calculus, Freud, textual criticism, linguistics, and statistics. We join communities constituted by discourse about field theory, the socioeconomic causes of the American Revolution, genetic

engineering, Plato's *Republic*, Georgia O'Keefe, Mary Wollstonecraft, John Cage.

Knowledge constructed in the languages of these communities is not "basic" in the sense that primary school education is "basic." That is, college and university education is not mostly foundational. College and university education is, or should be, mostly nonfoundational.

It is nonfoundational in two ways. First, college and university education is less likely to address questions with widely agreed-upon answers such as spelling, sums, where Washington camped, and what Hamlet said. It is more likely to address questions with dubious or ambiguous answers, answers that require well-developed judgment to arrive at, judgment that learning to answer such questions tends, in turn, to develop. Examples of these questions include, What are the cultural nuances of the word "sauce"? What were Washington's reasons for camping at Valley Forge? What is the nature of infinite sets and the solutions to partial differential equations? What are the implications of Hamlet's first line?

The other way college and university education is mostly nonfoundational has to do with the authority of teachers and of what teachers teach. In primary school, most children take for granted their teachers' authority and the authority of what their teachers teach, and they openly acknowledge that authority. Adolescents—middle or junior high school students and high school students—do of course resist their teachers' authority. But in most cases by resisting it they continue tacitly to acknowledge it.

College and university students too may openly acknowledge their teachers' authority, and by resisting it tacitly acknowledge it. But what college and university students should not do is take their teachers' authority and the authority of what they teach for granted. The authority of knowledge taught in colleges and universities should always be subject to doubt. Students should doubt answers, methods for arriving at answers, even the questions to be asked, and perhaps above all the authority of those who "profess" that knowledge. And doubting is the easy, the "sophomoric," part. The far harder and more important part of college and university education, as William Perry demonstrated, is learning to come to terms with that doubt. Teaching students to come to terms with doubt is the second way that college and university education is nonfoundational.

WHAT COLLEGE TEACHERS DO

That college and university education is mostly nonfoundational defines a college or university teacher's responsibility. This responsibility differs in one important way from the responsibility of primary and secondary school teachers. All of us, of course, are hired to help bring up other people's children. And college and university teachers, like primary and secondary school teachers, usually reacculturate students into one or more relatively small, "specialized," focused communities of well-established knowledge. In colleges and universities, these communities of established knowledge tend to be constituted by the language of, for example, fractals, genetic engineering, and "The Art of the Fugue."

But college and university teachers are also responsible for reacculturating students into the community that overlaps and encompasses all of these small, established communities. I would

call this larger community the community of "liberally educated" people. "Liberal education" is a much-abused term these days. But even its severest critics would probably agree that "liberally educated" people accept as a premise that most questions, answers, methods, and criteria are subject to challenge, discussion, and change. A major part of a college and university teacher's responsibility is to marshal students' competence in "associated life" so that they can cope interdependently with the intellectual challenges generated by and within this encompassing community of uncertainty, ambiguity, and doubt.

Fortunately, by the time students get to college most of them already know at least the rudiments of the craft of interdependence. Many students entering colleges and universities in fact know a lot about "associated life," and they have had a lot of experience achieving collective goals. They have played ball, put on dances and parties and protest marches, published newspapers, run charitable programs, and organized self-help groups. Some of them today have also experienced some well-organized cooperative learning, thanks to the work of skilled and thoughtful primary and secondary school teachers.

In short—although culture, family, and educational background account for some variation—college and university teachers can count on most entering students having a pretty well-developed ability to share their toys.

GOALS

As a result, we could say, collaborative learning in colleges and universities complements the cooperative learning that children may experience in primary school. With regard to the educational career of any individual person, collaborative learning is designed to pick up where cooperative learning leaves off. The principle remains substantially the same. The emphasis changes.

One goal of cooperative learning is to make primary school education more efficient and effective by helping children of whatever background learn to work together successfully on substantive issues. Another important goal is social integration—for example, helping African-American and white children overcome biases against each other.

One goal of collaborative learning is also to help people learn to work together successfully on substantive issues. But since collaborative learning was developed for teaching adolescents and adults, its principal goal is to make the mostly nonfoundational education of college and university students more efficient and effective. Another important goal of collaborative learning is the structural reform and conceptual rethinking of higher education.

In both cooperative learning and collaborative learning, in order to help students learn to work interdependently on substantive issues, teachers have a range of options to choose from depending on the conditions they find themselves in, their students' age and background, and the aims of the courses they

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are teaching. Some of these options, however, are more suitable to one institutional context than the other. The differences between cooperative and collaborative learning don't matter much so long as teachers use the options they offer with the population they were developed for: cooperative-learning methods with primary school children, collaborative-learning methods with college and university students.

Problems arise, however, when teachers use these options with a population for which they were not developed. These problems are far from insoluble, but their existence leads to the conclusion that describing cooperative and collaborative learning as complementary understates some important differences between the two. Some of what collaborative-learning pedagogy recommends

that teachers do tends in fact to undercut some of what cooperative learning might hope to accomplish, and vice versa.

More specifically, as I shall explain in the rest of this article, an important goal of cooperative learning is to hold students accountable for learning collectively rather than in competition with one another, but some of the pedagogy of collaborative learning tends to thwart that goal. Furthermore, collaborative learning seeks to shift the locus of classroom authority from the teacher to student groups, but that goal may be thwarted by some of the pedagogy of cooperative learning.

HOW COLLABORATIVE LEARNING UNDERCUTS COOPERATIVE LEARNING

Cooperative learning began with the observation that competition among students sometimes impedes learning. According to the Johnson brothers and Karl Smith, when students enter a traditional classroom, they tend to say to themselves either, Who do I have to beat in this course to get an A? or, There's no way I'm going to beat these guys—why not drop out? Cooperative learning is designed to change those questions. It wants students to ask instead, Who in this classroom can give me some help, and How can I help someone else in here?

Changing the questions people ask is a process of reacculturation, and as I have pointed out, reacculturation requires associated effort. For that reason, cooperative learning makes sure in several ways that students do work associatively, that they learn a variety of social skills, that their work in groups stays on track, and that every student contributes equitably to that work.

To make sure that students are always accountable in these ways and neither compete individually nor become chronically dependent upon one another, teachers who organize cooperative learning tend to assign a number of social roles to students working in small groups. They intervene frequently and randomly in the work of the groups. They test students at the end of group activities. Sometimes they choose students randomly, quiz them, and assign their quiz grade to the whole group. Sometimes they observe how frequently individuals participate in each group. And sometimes they reward groups with a com-

mon grade for the degree to which the group as a whole has arrived at the correct answer or solution.

This aim of cooperative learning to ensure accountability is undercut by collaborative learning in at least four ways. First, collaborative learning recommends that teachers not do most of the things that cooperative learning says teachers should do in order to make sure that students participate equally and fully and to make sure that the process works as teachers want it to work. Collaborative learning defines only one social role—a recorder, who writes a report of the group's discussion and consensus and then speaks for the group to the class as a whole. And it does not assign students to play that social role. Each group itself decides who will serve as the group's recorder. That is the first decision that students make together in collaborative learning. From then on, group governance remains as much as possible in the hands of students.

Second, as the work proceeds, collaborative learning pedagogy undercuts student accountability still further by recommending that teachers not intervene in working groups, or that they intervene only very seldom and under well-defined conditions. It even suggests that teachers leave the room for short periods of time, putting students clearly and unequivocally on their own to govern themselves and pursue the task in the way they see fit. It recommends that teachers respond to questions about substance, procedure, or social roles by turning those questions back to the groups to resolve on their own.

Third, collaborative learning recommends that teachers not evaluate "group process"—the quality of the relationships that group members work out and maintain among themselves. In point of fact, teachers who organize collaborative learning have very little basis for evaluating how students are getting along, because they aren't close enough to the action most of the time. Teachers grade students, of course, but individually, after the fact, on how well they can write about or apply what they have learned collaboratively.

Collaborative learning does not hope to eliminate competition among individuals as cooperative learning does. On the other hand, by formalizing or focusing "associated life" as "teamwork," collaborative learning does not encourage or exploit competition either. It tends instead to shift the locus of competition informally from between individuals to among groups.

Finally, and perhaps most importantly, collaborative learning pedagogy undercuts cooperative learning's aim to ensure accountability by encouraging dissent. Collaborative learning assumes that resisting the task, rebelling against the teacher, and questioning each other's views within a group may be inevitable and often necessary aspects of learning. That is, it supposes that, in group work, getting off the track for a while by rebelling against the task or by questioning the question may sometimes be the best way—and perhaps the only way—to do the task well, answer the question, or solve the problem. It also supposes that trying to account for dissent—what may be motivating a group member to dissent against the prevailing opinion—is an especially powerful tool of understanding.

Consistent with this cultivation of dissent, collaborative learning assumes that, relative to the most important questions and problems, the "correctness" of an answer or solution is seldom absolute. What is considered "correct" is more likely to be a matter of the relationship of the answer to a current consensus in the larger disciplinary or cultural group that the

teacher belongs to and represents in the classroom. Teachers design collaborative learning tasks specifically, therefore, to make sure that an answer or solution cannot be judged in any absolute way "correct."

Once again to take physics as an example, working out a typical problem-set question, such as the formula for determining acceleration under specified conditions, while it could be a cooperative-learning assignment, would not be a task assigned for collaborative learning. Instead, the collaborative-learning task might be to describe two or three different ways of determining acceleration, decide which is likely to be the best way, and explain why. Or perhaps the task might be to design a demonstration of acceleration that illustrates various aspects of the relevant mathematics. In the humanities or social sciences, the task might be to define the terms in a key passage and then paraphrase the passage or else apply a theory or concept to relevant data.

HOW COOPERATIVE LEARNING UNDERCUTS COLLABORATIVE LEARNING

Just as collaborative-learning pedagogy tends to undercut accountability, cooperative-learning pedagogy tends to undercut collaborative learning's aim to shift the locus of authority from the teacher to student groups.

Collaborative learning began with an observation that is arguably the flip-side of cooperative learning's intention to reduce competition among individual students—the observation that the hierarchical authority structure of traditional classrooms can be educationally deleterious, because it establishes what Mary Louise Pratt calls "contact zones" that isolate students from each other. One effect of this isolation is to fuel student competitiveness.

Contact zones, Pratt says, are "contexts of highly asymmetrical relations of power" that silence students and pacify them. Traditionally, teachers tend to "feel that their teaching has been most successful when they have eliminated" their students' "unsolicited oppositional discourse, parody, resistance, [and] critique." Aware that this dissent is unwelcome, students manipulate the classroom social order and subvert the teacher's control. The curriculum becomes, as it's called in student patois, learning how to psych teachers out and give 'em what they want.

Collaborative learning replaces the traditional classroom social structure with another structure: negotiated relationships among students and a negotiated relationship between those student communities and the teacher. By cultivating students' interdependence, this alternative classroom social structure helps students become autonomous, articulate, and socially and intellectually mature, and it helps them learn the substance at issue not as conclusive "facts" but as the constructed result of a disciplined social process of inquiry.

What students do first in collaborative learning is construct knowledge socially in small groups. Then they test socially the knowledge they have constructed, first in the larger community of the class as a whole and then in the much larger professional community represented in the classroom by the teacher. This nesting of smaller knowledge communities within increasingly larger ones both constructs the authority of knowledge and is the principal tool for evaluating, confirming, and, when necessary, revoking that authority.

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Cooperative learning's vigilance in supervising the process of "associated life" tends to undercut the aim of shifting authority from teacher to student groups by, in the terms I have borrowed from Mary Louise Pratt, perpetuating the asymmetrical power relations that suppress dissent.

The controls that cooperative learning recommends, often effective and necessary with primary school children, are likely, therefore, to frustrate and discourage adolescents and adults by leaving in place, unquestioned, the hierarchical social structure of traditional teaching. The expectations of collaborative learning, however, that most adolescents and adults can become critically engaged in their work through largely unsupervised associated effort, may sometimes be an inappropriate demand to make of children.

THE BOTTOM LINE

To sum up then, the educational advantages of "associated life" are what unite cooperative learning and collaborative learning. In both, we learn to share our toys, and we learn by sharing them. It is not mainly their strengths but their liabilities that distinguish cooperative and collaborative learning.

The major disadvantage of collaborative learning is that in nurturing the educational rewards to be gained from self-governed student peer relations, it sacrifices guaranteed accountability. The major disadvantage of cooperative learning is that in guaranteeing accountability, it risks maintaining authority relations within each small working group and in the class as a whole that replicate the authority relations of traditional education.

But both require college and university faculty members and primary and secondary school teachers alike to find ways

to renegotiate the classroom control that comforts teachers but can frustrate and discourage children, adolescents, and adults. Both assume that most people—children, adolescents, and adults—can become critically engaged in school work when teachers find ways to displace direct supervision into open-ended tasks undertaken collaboratively. And both tend to assume that knowledge is not some absolute either inside or outside us but is instead a social construct.

Both are therefore responses to the Deweyan understanding that, as the philosopher and educator Cornel West recently put it, "once one gives up on the search for foundations and the quest for certainty, human inquiry into truth and knowledge shifts to the social and communal circumstances under which persons can communicate and cooperate in the process of acquiring knowledge." □

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